

Date: March 2, 1997

To: Loren Botorff

From: Phil Unger

*Philip C. Unger*

Subject: Review of February 24, 1997 Inhouse Working  
Draft of Ecosystem Restoration Program Plan,  
Sections Addressing Delta Fisheries Issues

This memorandum provides my principal comments and overall impressions regarding the Draft Ecosystem Restoration Program Plan. As we agreed in our conversation last Tuesday, I limited my review to sections of the plan that covered issues directly related to Delta fisheries. I also reviewed the introductory material in Volume I to get myself oriented to the objectives and basic organization of the plan. Thus, I reviewed Volume I from the beginning to page 101, Volume II from page 133 through page 151 and from page 171 through page 184, and all of Technical Appendix 12.

My overall impression of the draft plan is that it provides the foundation for a very useful document. The scope of material covered is impressively broad and most of the material I reviewed was handled well. However, this draft is quite rough and will need much more work before it is ready for release. There are major unfinished sections (e.g., items on pages 63 through 79 of Volume I and the subsequent reference section) and other sections have been repeated a number of times without adequately tailoring their contents to fit their context (this is particularly true of the "Rationale" statements in Volume I). I have listed my major criticisms and suggestions below. I have also provided many comments and suggested changes to the text as handwritten notes on the document. Note that the page numbers given below refer to Volume I unless otherwise specified.

- Organization is too fragmented. The document reads too much like an outline. There are so many levels of headings and subheadings that the reader is easily lost. Formatting of section levels is not always consistent, which does not help. Many sections would benefit from an introduction to orient the reader.
- The introduction of Volume I should include a summary table listing the major features of the three CALFED alternatives.

- Use of the terms “food web” and “productivity” do not always conform to standard ecological definitions and their meanings in the document, therefore, is not always clear. For example, expressions such as “stimulate the foodweb”, “foodweb integrity”, and “foodweb productivity” are not very precise. Similarly, the term “productivity” seems often to be used rather loosely. For instance, discussions of productivity and nutrients seem to suggest that more is always better. However, as demonstrated by many examples of eutrophication, increased nutrients and productivity often lead to highly undesirable habitat conditions. Increasing total production (e.g., by increasing area of habitat) is generally desirable, but increasing productivity (e.g., by increasing nutrient input) may not be desirable because, among other things, it may provide exotic species with a competitive advantage. This sort of subtle distinction is important but is generally missing in the discussions in the plan. On page 50 and elsewhere, loss of nutrients to diversions is listed as a problem. I see no point in separating the nutrients from the water in this discussion - to do so only clouds the issue. If water was lost without losing the nutrients, conditions might become eutrophic and undesirable.
- Obscure technical terms are not always defined. For example, the terms “land-water interface ratio” and “ratio of wetted perimeter” are introduced on page 5 and the former term is used extensively later in the document, but neither term is defined. Similarly, “entrainment index” on page 25, “DBEEP” on page 31, and “zone of the mid-water trawling area” on page 135, Volume II, are not defined.
- The “Vision” sections for the South and Central/West Delta Units need to provide more emphasis on and explicit discussion of reverse/upstream flow problems.
- Many of the Rationale statements in Volume I (pages 35 through 79) are too general, wordy, and redundant to be useful. It appears that many were prepared simply by copying previous Rationale statements and, therefore, do not specifically address the Target and Programmatic Action statements that they follow. The Rationale statements should be more than elaborations or generalizations of the benefits associated with the implementation objectives; they should include explanations for how actions contribute to targets and for how specific targets were derived.